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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,338	09/08/2003	Robert R. Rice	7784-000626	8818
65961 7590 05/15/2007 HARNESS DICKEY & PIERCE, PLC P.O. BOX 828 BLOOMFIELD HILLS, MI 48303			EXAMINER RAMIREZ, JOHN FERNANDO	
			ART UNIT 3737	PAPER NUMBER
			MAIL DATE 05/15/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/657,338	Applicant(s) RICE ET AL.	
	Examiner John F. Ramirez	Art Unit 3737	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7,9,11,12,14-23,25-27 and 29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7,9,11,12,14-23,25-27 and 29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments, see remarks, filed on February 28, 2007, with respect to the rejection(s) of claim(s) 1, 2, 4, 6-7, 12, 15, 17-19 and 21 under 102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new rejection is made in view of newly found prior art in order to expedite the prosecution of this application.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-7, 9 and 11 recites the limitation "the image" in the third line of claim 1.

There is insufficient antecedent basis for this limitation in the claim.

Claims 1-7, 9 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 1 it is unclear as to how a camera produces of a portion of the subject. Therefore it is also unclear as to how the processor receives the image and compares the image to a base line reflectance spectrum.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 3737

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4, 6-7, 12, 15, and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pavlidis (US 6,854,879) in view of Anbar (US 5,771,261), McCulloch et al. (US 6,986,747) and in further view of Elli Angelopoulou (*The Reflectance Spectrum of Human Skin*), Kataoka (*Development of a Skin Temperature Measuring System for Non-contact Stress Evaluation*).

Pavlidis does not explicitly teach a system for determining physiological stress based on spectral reflections. However, a method for measuring and determining the stress of a person using a system based on spectral reflections is conventional in the art as evidenced by the teachings of Anbar (see abstract, col. 7, lines 18-55) and McCulloch et al. (see abstract, col. 3, lines 1-23). It would have therefore been obvious to one of ordinary skill in the art to use the teachings by Anbar and McCulloch et al. to modify the teaching by Pavlidis for the purpose of effectively determine stress involving the measurement of changes in skin perfusion.

Claims 3, 9, 11, 14, 20, 22-23, 25, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pavlidis in view of Anbar (US 5,771,261), McCulloch et al. (US 6,986,747) and in further view of Elli Angelopoulou (*The Reflectance Spectrum of Human Skin*).

Pavlidis, teaches all the limitations of the claimed subject matter except for mentioning specifically a system wherein the attenuation occurs near a frequency selected from the group consisting of about 542 nanometers, about 560 nanometers, about 576 nanometers, about 1400 nanometers, and about 1700 nanometers, wherein the processor identifies the first spectral reflection of ambient light from a back of the hand of the subject, wherein the processor identifies the second spectral reflection of ambient light from a palm of the hand of the subject, wherein the attenuation is representative of a change in a reflected spectrum in a sub-dermal blood flow and dermal hydration and the attenuation indicates a blush.

However, a system wherein the attenuation occurs near a frequency selected from the group consisting of about 542 nanometers, about 560 nanometers, about 576 nanometers, about 1400 nanometers, and about 1700 nanometers, wherein the processor identifies the first spectral reflection of ambient light from a back of the hand of the subject, wherein the processor identifies the second spectral reflection of ambient light from a palm of the hand of the subject, wherein the attenuation is representative of a change in a reflected spectrum in a sub-dermal blood flow and dermal hydration and the attenuation indicates a blush are considered conventional in the art as evidenced by the teachings of Elli Angelopoulou (*The Reflectance Spectrum of Human Skin*).

Elli Angelopoulou discloses a system wherein the attenuation occurs near a frequency selected from the group consisting of about 542 nanometers, about 560 nanometers, about 576 nanometers, about 1400 nanometers, and about 1700 nanometers, wherein the processor identifies the first spectral reflection of ambient light

from a back of the hand of the subject, wherein the processor identifies the second spectral reflection of ambient light from a palm of the hand of the subject, wherein the attenuation is representative of a change in a reflected spectrum in a sub-dermal blood flow and dermal hydration and the attenuation indicates a blush (see abstract, see section Skin reflectance Data).

Based on the above observations, for a person of ordinary skill in the art, modifying the system disclosed by Pavlidis, with the above discussed enhancements would have been considered obvious because such modifications would have improved the system to detect physiological stress in humans by providing more accurate data of the light reflected from the skin.

Claims 5 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pavlidis in view of Anbar (US 5,771,261), McCulloch et al. (US 6,986,747) and in further view of Kataoka (*Development of a Skin Temperature Measuring System for Non-contact Stress Evaluation*).

Pavlidis, teaches all the limitations of the claimed subject matter except for mentioning specifically a system wherein the processor is coupled to an alarm and activates the alarm if the area of the image more closely coincides with the second spectral characteristic.

However, the system wherein the processor is coupled to an alarm and activates the alarm if the area of the image more closely coincides with the second spectral characteristic is considered conventional in the art as evidenced by the teachings of Kataoka.

Kataoka discloses a system wherein the processor is coupled to an alarm and activates the alarm if the area of the image more closely coincides with the second spectral characteristic (see sections 2.1 and 2.2.1).

Based on the above observations, for a person of ordinary skill in the art, modifying the system disclosed by Pavlidis, with the above discussed enhancements would have been considered obvious because such modifications would have improved the system to detect physiological levels of stress induced by an emergent condition providing more accurate data of skin temperature changes.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John F. Ramirez whose telephone number is (571) 272-8685. The examiner can normally be reached on (Mon-Fri) 7:30 - 4:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian L. Casler can be reached on (571) 272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JFR


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